

I claim:

1. An artificial facet joint, comprising:
 - a spinal implant rod;
 - a connector, said connector comprising a screw and a rod connecting member having structure for engagement of said rod, the rod connecting member being pivotally engaged to said screw.
2. The artificial facet joint of claim 1, wherein the rod connecting member is detachable from the screw.
3. The artificial facet joint of claim 1, wherein said pivoting is about a pivot point substantially in the long axis of the screw.
4. The artificial facet joint of claim 1, wherein said connector is a polyaxially pivotable relative to the rod.
5. The artificial facet joint of claim 4, wherein said connector engages the rod to prevent sliding movement of the rod relative to the connector.
6. The artificial facet joint of claim 4, wherein the connector permits sliding movement of the rod relative to the connector.

7. The artificial facet joint of claim 1, wherein said connector comprises a saddle portion and a detachable cap for enclosing the rod within the saddle portion.

8. The artificial facet joint of claim 1, further comprising structure for limiting the angulation of said connector relative to said screw.

9. The artificial facet joint of claim 8, wherein said structure for limiting the angulation provides increasing resistance as the degree of angulation increases.

10. The artificial facet joint of claim 8, wherein said structure for limiting the angulation comprises a stop on at least one of said connector and said screw.

11. The artificial facet joint of claim 10, wherein said stop comprises an elastic material.

12. The artificial facet joint of claim 1, further comprising a second spinal implant rod and a second connector, said second connector comprising a screw and a rod connecting member having structure for engagement of said rod, the rod connecting member being pivotally engaged to said screw, said facet joint further comprising a crosslinking member for engaging and connecting said spinal rods.

13. The artificial facet joint of claim 12, wherein said crosslinking member engages said spinal rods and contacts said connectors to limit movement of said spinal rods relative to said connectors.

14. The artificial facet joint of claim 13, wherein said transverse member comprises a biasing portion to provide biasing against changes in the distance between the rods.

15. An artificial facet joint comprising a spinal implant rod and a connector with a rod connecting portion and a screw portion, the connector permitting sliding movement of the rod relative to the rod connecting portion and pivoting of the rod relative to the screw portion.

16. The artificial facet joint of claim 15, wherein said pivot is about a pivot point substantially in the long axis of the screw.

17. An artificial facet joint comprising a spinal implant rod and a connector with a rod connecting portion and a screw portion, the connector engaging the rod to prevent sliding movement of the rod relative to the rod connecting portion and permitting pivoting of the rod relative to the screw portion.

18. The artificial facet joint of claim 17, wherein said pivot is about a pivot point substantially in the long axis of the screw.

19. An artificial facet joint comprising a spinal implant rod and a fixation connector with a rod engaging portion and a screw portion, the fixation connector engaging the rod to prevent sliding movement of the rod relative to the rod engaging portion and permitting pivoting of the rod relative to the screw portion; and a sliding connector with a rod connecting portion and a screw portion, the sliding connector permitting sliding movement of the rod relative to the rod connecting portion and pivoting of the rod relative to the screw portion.

20. An artificial facet joint comprising a spinal rod that is substantially parallel to the spinal column.

21. The artificial facet joint of claim 20, wherein said rod spans at least three vertebrae.

22. An artificial facet joint comprising a spinal rod that articulates in the sagittal plane.

23. An artificial facet joint that connects vertebral bodies of adjacent vertebrae on the same lateral side of the spine with a single rod.

24. An artificial facet joint comprising a spinal implant rod and at least one connector for sliding engagement of the rod, said connector further having structure for engaging the spine, said rod having a shape defining a desired bending of the spine, such that bending of the spine

will cause sliding movement of the connector relative to said rod, and said rod will guide said connector according to a path defined by said rod.

25. An artificial facet joint comprising a spinal implant rod and at least one connector for engaging the rod to a screw, wherein the connector is movable over the screw, and the screw is shaped to provide a path for guiding the motion of the spine during bending of the spine.